LEWIS AND CLARK BRIDGE DECK REPLACEMENT PROJECT

BRIEFING PAPER
Prepared for the
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Prepared by: Jilayne Jordan, Public Information Officer, Southwest Region
Reviewed by: Amy Revis, Kelso Area Engineer, Southwest Region
Approved by: Don Wagner, Southwest Region Administrator

PURPOSE:

This presentation will provide the Commission with information about the status of the Lewis and Clark Bridge deck replacement project and its innovative construction techniques.

ACTION/OUTCOME:

No action is required of the Commission.

BACKGROUND:

The Lewis and Clark Bridge spans the Columbia River between Longview, Washington and Rainier, Oregon. Constructed in 1929, it was designed by famed engineer Joseph B. Strauss who also designed the Golden Gate Bridge.

Construction on the project began in January 2003, and should be complete this summer. The project is currently running on time and under the engineer's estimate. The total project cost, including design and engineering, is being divided evenly between Washington and Oregon.

A unique approach to a bridge project

The project will completely replace all 103 concrete deck panels on the main span of the bridge, widen the Washington approach and help smooth out a dip on the Oregon approach. The new roadway configuration also will eliminate the existing raised sidewalks and provide wider shoulders for bicyclists and pedestrians, as well as additional room for traffic to maneuver around disabled vehicles and routine maintenance operations.

In order to replace the deck panels, WSDOT and its contractor, Max J. Kuney Company of Spokane, are using 120 eight-hour long full nighttime closures (9:30 p.m. to 5:30 a.m.) during which time one panel can be removed and a new one put in place before the bridge is reopened to traffic. Four full weekend closures are also allowed in the contract

for work that requires more than eight hours to complete. To date, two of the four allowed weekend closures have been used.

Several innovative techniques are being used on this project in order to successfully replace a full two-lane deck panel in just eight hours. The first of these is the manufacture and use of precast concrete panels. The usual pour-in-place method would have reduced traffic on the bridge to two nine-foot lanes and the project would have taken four years to complete. The precast panels, designed by WSDOT's Bridge Office specifically for this project, allow individual panels spanning the full width of the bridge to be cast ahead of time and then set into place in one eight-hour closure of the bridge.

To help crews quickly remove an old deck panel and insert a new one, Max J. Kuney hired Dutch company, Mammoet, to design a panel transport system for the project. Mammoet, internationally known for its salvage and transport equipment, was the company responsible for raising the Russian submarine, Kursk, after it sank in August 2000. The massive Mammoet panel transport system, operated entirely by remote control, handles four jobs at once by transporting the new panel onto the bridge, lifting out the old panel, lowering the new one into place and hauling the old panel off the bridge.

Providing community connections
A comprehensive public communications plan was established for this project based on public input prior to construction. The plan involves a wide variety of communications tools, which allows anyone with a telephone, radio, computer or access to the local media to find the latest bridge closure schedule. A Web camera provides around-the-clock views of the Washington approach to the bridge.

During full nighttime or full weekend closures of the bridge, WSDOT provides free, prioritized emergency medical helicopter service from the Oregon side of the bridge to the hospital in Longview. In addition, the Wahkiakum County/Puget Island ferry runs nonstop between Cathlamet, Washington and Westport, Oregon during all full bridge closures–also free of charge.

DISCUSSION:

There will be an opportunity for questions after the presentation.

RECOMMENDATION:

For further information, contact Amy Revis, Kelso Area Engineer, 360-442-1346 or visit the project Web site at http://www.wsdot.wa.gov/projects/lewisclarkbridge/.